

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (currently amended) An end face sensor device, comprising:

a linear body (2001), the linear body having a conductive polymer center electrode (2007) with an outer circumference of the center electrode coated with an insulating film (2008); and

~~characterized in that~~ a receiving part for receiving information from a subject and outputting the information as another information ~~[[is]]~~ formed on an end face of ~~[[a]]~~ the linear body.

2. (previously presented) An end face sensor device as claimed in claim 1, characterized in that the receiving part is a light sensor.

3. (original) An end face sensor device as claimed in claim 2, characterized in that the light sensor is any of a photodiode, a phototransistor, a photo IC, a photo thyristor, a photoconductive element, a pyroelectric element, a color sensor,

a solid-state image sensor, an element for position detection, and a solar battery.

4. (original) An end face sensor device as claimed in claim 1, characterized in that the receiving part is a temperature sensor.

5. (original) An end face sensor device as claimed in claim 1, characterized in that the receiving part is a humidity sensor.

6. (original) An end face sensor device as claimed in claim 1, characterized in that the receiving part is an ultrasonic sensor.

7. (original) An end face sensor device as claimed in claim 1, characterized in that the receiving part is a pressure sensor.

8. (currently amended) An end face sensor device as in claim 1, characterized in that a part or all of the receiving part is formed using a ~~conductive~~ polymer.

9. (currently amended) An end face sensor device as claimed in claim 8, characterized in that ~~only~~ a distal end of

one molecule of the ~~conductive~~ polymer of the receiving part is present between electrodes is modified by an ion group.

10. (previously presented) An end face sensor device as in claim 1, characterized in that the linear body is a linear element in which a circuit element is formed continuously or intermittently in a longitudinal direction.

11. (previously presented) An end face sensor device as in claim 1, characterized by being a linear element in which a cross section having plural regions for forming a circuit is formed continuously or intermittently in a longitudinal direction.

12-26. (canceled)

27. (new) An end face sensor device as claimed in claim 1, characterized in that said device has flexibility or bendability along a length of the linear body.

28. (new) An end face sensor device as claimed in claim 8, characterized in that the polymer of the receiving part is a conductive polymer.

29. (new) An end face sensor device as claimed in claim 27, characterized in that the receiving part is a light sensor.

30. (new) An end face sensor device as claimed in claim 29, characterized in that the light sensor is any of a photodiode, a phototransistor, a photo IC, a photo thyristor, a photoconductive element, a pyroelectric element, a color sensor, a solid-state image sensor, an element for position detection, and a solar battery.

31. (new) An end face sensor device as claimed in claim 27, characterized in that the receiving part is a temperature sensor.

32. (new) An end face sensor device as claimed in claim 27, characterized in that the receiving part is a humidity sensor.

33. (new) An end face sensor device as claimed in claim 27, characterized in that the receiving part is an ultrasonic sensor.

34. (new) An end face sensor device as claimed in claim 27, characterized in that the receiving part is a pressure sensor.

35. (new) An end face sensor device as in claim 27, characterized in that a part or all of the receiving part is formed using a conductive polymer.

36. (new) An end face sensor device as claimed in claim 35, characterized in that one molecule of the polymer is ion modified.

37. (new). An end face sensor device as in claim 27, characterized in that the linear body is a linear element in which a circuit element is formed continuously or intermittently in a longitudinal direction.

38. (new) An end face sensor device as in claim 27, characterized by being a linear element in which a cross section having plural regions for forming a circuit is formed continuously or intermittently in a longitudinal direction.

39. (new) An end face sensor device, comprising:  
a linear body (2001), the linear body having a conductive polymer center electrode (2007) with an outer circumference of the center electrode coated with an insulating film (2008);

a light sensor receiving part for receiving information from a subject and outputting the information as another information formed on an end face of the linear body,

the receiving part comprising an n-type semiconductor layer (2004) formed on the end face of the linear body, with a p-type semiconductor layer (2003) formed on the n-type semiconductor layer, the n-type and p-type layers together forming a pn junction of the light sensor receiving part; and

a transparent electrode (2006) coating the p-type semiconductor layer, the end face of the linear body, and the insulating film.

40. (new) An end face sensor device, comprising:

a micro-syringe;

plural linear bodies (2001) bundled together within the micro-syringe and having outer circumferential electrodes in contact with each other, each linear body having a polymer center electrode;

a receiving part formed on an end face of a distal end of each of the bundled linear bodies, each receiving part being a different function sensor for receiving information from a subject and outputting the information as another information,

wherein, the device is a multifunctional end face sensor device with a high-density sensor array.

41. (new) The end face sensor device of claim 40,  
wherein,

the bundled linear bodies include from about 330 to 400  
linear bodies, and

the micro-syringe has an inside diameter of 0.2  $\mu\text{m}$ ,

the center electrode of each linear body is a  
conductive polymer.